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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,347	01/15/2004	Arun Nandkishor Dixit	126124-4	5316

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EXAMINER

SASTRI, SATYA B

ART UNIT PAPER NUMBER

1713

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/758,347

Applicant(s)

DIXIT ET AL.

Examiner

Satya B Sastri

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/20/04, 1/15/04</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. This office action is in response to a Divisional Application filed on January 15, 2004.

*Claims 1-24* are now pending in the application.

#### *Claim Objection*

2. *Claim 1* is objected to because of the following informalities: The nomenclature of the compounds does not differentiate substituents that are present in different aromatic rings.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. *Claim 1* recites the limitation "said 1-[4-(4-phenylbenzoyl)]halobenzene" in line 10.

There is insufficient antecedent basis for this limitation in the claim.

#### *Claim Rejections - 35 USC § 103*

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hildreth et al. (US 3,507,606) in view of Rose (US 3,979,459) and further in view of Organic Chemistry (John McMurry, Second Ed., 1988, pages 751, 530-533).

The prior art to Hildreth et al. discloses **dyes** based on **anthraquinone derivatives** and the **methods** for preparing the same. The disclosure includes a **pink dye** based on the reaction of an **anthraquinone derivative** containing at least one **primary group** with a **halogenated compound** such as p-chlorobenzaldehyde, p-bromobenzaldehyde, p-bromobenzophenone etc. (column 4, lines 67-75 and first compound in table 1).

The difference between the prior art and the present invention is that the prior art discloses the method to prepare a similar dye based on a phenyl as opposed to a biphenyl substituent disclosed in the instant invention.

The prior art to Rose teaches halogenated compounds and their preparation. For instance, the art discloses the preparation of substituted 4-phenyl benzophenones by way of Friedel Craft condensation reaction of the appropriate 4-halobenzoyl halide (with the halo group as fluoro, chloro or bromo) with the appropriate aromatic radical (column 1, lines 56-60 and column 2, lines 10-14).

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Even though the secondary reference relies on the starting material as halobenzoyl chloride, it is known to one skilled in the art that the precursor to the same is halobenzoic acid. For instance, an organic chemistry text book teaches the method of preparing halobenzoyl chloride from halobenzoic acid and further discloses that acid halides are among the most reactive of carboxylic acid derivatives and therefore can be converted into a variety of other compound types (pages 751, 530-533).

One skilled in the art would be motivated to combine the methods as disclosed in the individual references with an expectation of success based on the fact that an extended conjugation resulting from substituting a phenyl group with a biphenyl improves the dye characteristics. Thus, it would have been obvious for one skilled in the art at the time the invention was made to combine the methods disclosed in the prior art references to obtain the method disclosed for the colorant composition in the instant invention. In re Durden, JR (226 USPQ 359 (CAFC 1985)). A "new" process/method may still be obvious even when considered as a whole, notwithstanding that specific starting material or resulting product or both is not found in the prior art. Reaction conditions claimed in terms of reaction temperatures, reaction time, catalysts, molar ratios of the reactants and catalysts, and solvents are considered to be result effective variables. Reaction processes to convert a halobenzoic acid into corresponding halobenzoylhalide and for Friedel Craft's alkylation and acylation reactions are routinely exploited in organic synthesis, and therefore, the obvious process parameters for such reactions may be addressed by routine optimization absent a showing to the contrary. It would have been obvious for one of ordinary skill in the art to arrive at the optimum processing conditions since it has been deemed that the discovery of optimum values of result-effective variables in a known

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process is within the level of ordinary skill in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 212 1112.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (571) 212 1114.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SATYA SASTRI

July 6, 2004

**TATYANA ZALUKAEVA**  
**PRIMARY EXAMINER**

